

Abstract

A gate valve for controlling the flow of fluid through a component having a fluid flow passage that includes at least a first branch and a second branch, the gate valve comprising a gate cavity which communicates with both the first branch and the second branch; a gate which is movably positioned in the gate cavity and which includes a first flow port that is connected to a second flow port; and an actuating mechanism for moving the gate between an open position, in which the first flow port is aligned with the first branch and the second flow port is in communication with the second branch, and a closed position, in which the first flow port is offset from the first branch; wherein the second flow port is divergent from the first flow port; whereby when the gate is in the open position, the direction of the flow of fluid through the gate valve is changed by the first and second flow ports.